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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,803	10/31/2003	Young-Chol Lee	Q77428	1161
23373	7590	03/04/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,803

Applicant(s)

LEE ET AL.

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13 and 16-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species V (Claims 1-11 and 14-15) in the reply filed on 1/13/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The applicant stated that the restriction requirement was traversed, however applicants arguments were addressed to the specific figures corresponding to particular species (which were not related to the elected species) and were addressed to the generic claims. The office agrees with applicant's assertions, however applicant has not distinctly and specifically pointed out the errors in the restriction requirement in general that would suggest that it is unnecessary or improper in general and accordingly the response to the restriction requirement is being treated as an election without traverse.

2. Claims 12, 13, and 16-22 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/13/2005.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum (US 6,272,269) in view of Kaelin et al. (US 6,435,682.)

Naum teaches in figure 9 a projection display comprising:

An illumination module; and

A slide (92) with image data on it,

Wherein the illumination module comprises:

A light source comprising a plurality of light emitting devices (66);

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A light guide panel (44 and/or 48) comprising a top surface from which light is emitted (exit portion that lights the slide), the top surface facing the slide, and an edge surface on which light is incident; and

An optical transport member (26 and 28) for guiding light emitted from the light source to the edge surface of the light guide panel, the cross sectional area of the optical transport member parallel to the edge surface increasing from the edge surface to the light source.

Naum teaches a slide instead of an optical modulator. Kaelin teaches in column 4 lines 15-26 that optical modulators (spatial light modulator) are interchangeable with slides, being better for active images and/or more complex still images. Accordingly it would have been obvious to one of ordinary skill in the art to replace the slides of Naum with a spatial light modulator, which allows for more complex still images and/or active images.

With regards to applicant's claim 2:

See column 6 lines 21-23 which teaches the optical transport member is made of fused silica. Fused silica is a transparent material.

With regards to applicant's claim 3:

See figure 9, which clearly shows the light reflecting off the surfaces of the body portion.

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With regards to applicant's claim 11:

Naum teaches in column 6 lines 31-50 that the index of the optical transport member is about 1.5 and made of fused silica which is a common material that waveguides (fiber optics) being the standard (see US 2003/0107739 to Lehmann et al. paragraph 60.)

With regards to applicant's claims 14 and 15:

Naum teaches light emitting device arrays which are LEDs (light emitting diodes.)

7. Claim 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum in view of Kaelin as applied to claims 1-3, 11, 14, and 15 above, and further in view of Okuyama et al. (US 6,814,442.)

As described in more detail above Naum in view of Kaelin teaches a projection display which among other things includes a body portion. Naum in view of Kaelin, however, does not teach that this body portion comprises a plurality of stair portions. Such a body portion is taught by Okuyama in figures 1 and 2 part K. Okuyama teaches in column 4 lines 36-55 that the structure of this body portion allows for more effective/efficient use of the light. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include stair portion in the body portion of Naum in view of Kaelin as taught by Okuyama.

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With regards to applicant's claim 5:

It is clear from inspection of figures 1 and 2 of Okuyama that the second and first surfaces are orthogonal to each other.

With regards to applicant's claims 9 and 10

See the with regards to claim 5 as well as the rejection of Naum in view of Kaelin's with regards to claims 14 and 15

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum in view of Kaelin as applied to claims 1-3, 11, 14, and 15 above, and further in view of Hooker et al. (US 6,554,463.)

As described in more detail above Naum in view of Kaelin teaches a projection display that among other things includes optical transport member having at least one light incident portion. Naum in view of Kaelin does not teach multiple light incident portions, however such a teaching is provided by Hooker in figure 1. Hooker teaches in column 3 lines 47-57 that by using individual light incident portions for each LED, less or no light is lost to the surrounding atmosphere making the optical transport/light source combination more efficient. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the multiple light incident portions of Hooker in the projection display of Naum in view of Kaelin.

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With regards to applicant's claims 7 and 8:

Both Naum in view of Kaelin and Hooker teach the use of multiple LEDs.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2004/0263804 to Basey et al. teaches in figures 3-6 an optical transport member which meets many of applicant's claims. Basey does not specifically teach the light guide panel, however this would be obvious in view of other prior art. Applicant should review Basey when making any amendments. It should be noted that Basey's provisional filing date is earlier than applicant's filing date.

US 2003/0187344 to Nilson et al. teaches in paragraph 47 one advantage of fused silica in light guides.

US 6,799,849 to Kim et al. teaches in figure 4 a projection display which includes holographic optical components that function as some of the claim components of the current invention do.

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US 5,808,709 to Davis et al. teaches in figure 3 a light source, optical transport member and light guide.

US 5,914,760 to Daiku teaches in figure 1 an optical transport member having step portions.

US 6,005,722 to Butterworth et al. teaches in figure 1 a projection display having an optical transport member/light guide combination part.

US 5,146,248 to Duwaer et al. teaches in figure 4 a waveguide and optical transport member.

US 6,508,564 to Kuwabara et al. teaches in figure 2 an optical transport member for gathering the light from an array of LEDs however there is no teaching of a light guide panel.

US 6,540,377 to Ota et al. teaches in figure 16 a projection display having optical transport members and light guide panels.

US 6,318,863 to Tiao et al. teaches in figure 2a a projection display device having optical transport members and light guide panels.

US 6,545,814 to Bartlett et al. teaches a multiple light incident surface light guide/optical transport member.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER